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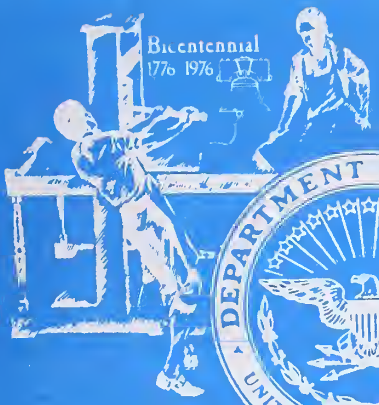

DEPARTMENT OF DEFENSE
UNITED STATES OF AMERICA

Report

HIGH SCHOOL NEWS SERVICE

March 1976

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Report

HIGH SCHOOL NEWS SERVICE REPORT MARCH 1976 VOL. 19 NO. 6

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The purpose of REPORT is to inform young people of their responsibilities, benefits and opportunities in the Armed Forces of the United States. It also serves the goal of keeping the public informed about its military services

The Secretary of the Navy has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this publication approved by the Director of the Office of Management and Budget, 8 August 1975.

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COVER: Two F-4 "Phantom" jets approach carrier for landing. They will reach the deck going 150 MPH and stop in 250 - 300 feet of space. Insert shows NFO (rear) and pilot in "Phantom" cockpit prior to landing.

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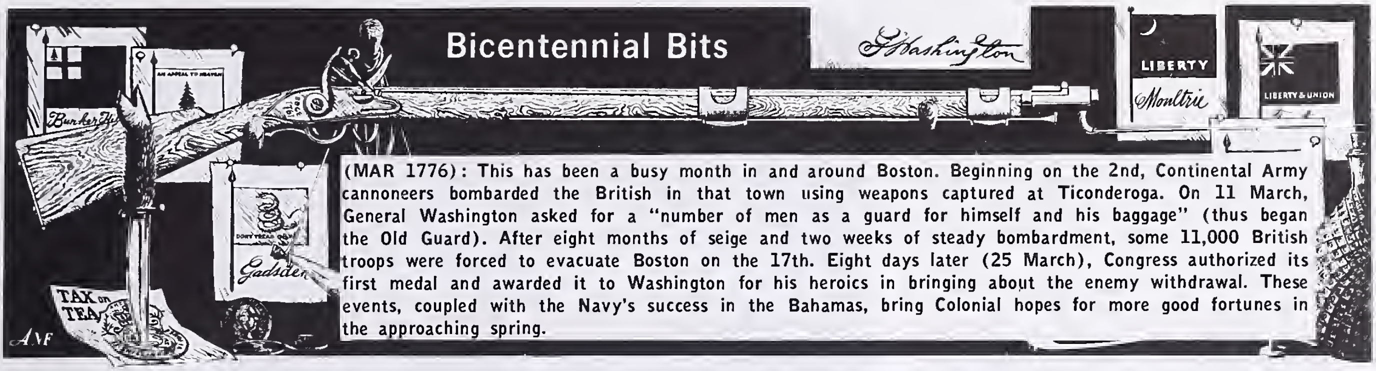
Counselor's Corner

Both the Director and Deputy Director of HSNS expect to attend the April 1976 American Personnel and Guidance Association Convention in Chicago. As part of the "Free-Take-One Exhibit," we will have copies of "Basic Facts About Military Service" and the April REPORT (stories on women in the Academies, HSNS, the military medical field) available. We look forward to meeting you and discussing subjects of mutual concern.

HSNS is now compiling and evaluating topics for the 1976-1977 REPORT printing year. We also are beginning to gather materials for updating the annual "Basic Facts." If there is a subject which you might wish to see covered or expanded upon, please write and inform us—be you student or counselor. All suggestions will be considered and they will provide us with a better idea of what concerns you the most.

Requests for copies of "Basic Facts" received after 1 July 1976 will be placed in a special hold file until October. This is due to the fact that the 1975–76 version of that particular REPORT has become outdated and the updated one is mailed in October. We will continue to fulfill requests for other issues of REPORT until they are depleted. If the 1975 "Facts" is desired for a particular reason even though outdated, inform us and we will send it.

Remember our new address: DoD, High School News Service, Bldg X–18, Naval Station, Norfolk, VA 23511.



Bicentennial Bits

(MAR 1776): This has been a busy month in and around Boston. Beginning on the 2nd, Continental Army cannoneers bombarded the British in that town using weapons captured at Ticonderoga. On 11 March, General Washington asked for a "number of men as a guard for himself and his baggage" (thus began the Old Guard). After eight months of seige and two weeks of steady bombardment, some 11,000 British troops were forced to evacuate Boston on the 17th. Eight days later (25 March), Congress authorized its first medal and awarded it to Washington for his heroics in bringing about the enemy withdrawal. These events, coupled with the Navy's success in the Bahamas, bring Colonial hopes for more good fortunes in the approaching spring.

Navigating America's rivers

COAST GUARD cutter CHENA moves up the Mississippi River servicing aids to navigation.

by e. l. buell, pal, uscg

From Minneapolis to New Orleans on the Mississippi River; Pittsburgh to St. Louis on the Ohio; Sioux City to St. Louis on the Missouri—the Coast Guard operates dozens of river tenders, Marine Safety Offices, boating safety detachments and several depots.

If Samuel L. Clemens were alive today, he might wish to rewrite some of his Tom Sawyer tales. The purpose would be to add anecdotes about the U.S. Coast Guard which Tom would surely encounter during his river experiences.

Over 6,000 miles of river help move tons of cargo by barge each year and every foot must be marked and patrolled. Additionally, the thousands of recreational and commercial boats and their passengers on these waterways must be protected and assisted. These missions are the responsibility of the Coast Guard.

While it seems odd to think of this seagoing Service away from salt water, the CG has been involved in river duty for some 100 years. In 1874, Clemens—alias Mark Twain—commented, ". . . for there is neither light nor buoy to be found anywhere in these thousands of miles of villainous river." The words must have had some effect, for that same year, Congress provided "for the establishment of such beacon lights, day beacons and buoys as may be necessary for use of vessels navigating these rivers." Hence, navigational aids along with life saving became priority river jobs for the CG.

If Tom Sawyer traveled today's Midwestern rivers, he might observe and describe the Coast Guard's performance in a variety of tasks during a typical day. He might note the crew of a buoy tender rises around 5 A.M., has breakfast and is underway within an hour. The ship immediately heads for the first of some 50 to 60 markers it will service during the day.

Reaching the initial destination, a boatswain's mate and machinery technician depart in a small outboard boat to check, repair or replace shore markers and buoy batteries, bulbs and structures. Meanwhile, the tender and its accompanying barge maneuver upstream until the first channel buoy is encountered. With precision, the ship's skipper eases his craft into position. Then Coast Guardsmen hook a boom to the marker, lift it from the water and onto the barge.

A refurbished buoy is hoisted out into the river replacing the defective one just removed from the water. As with others, this replacement marker had previously been taken to a nearby depot for cleaning, painting and repair. Each of the 700 pound giants mark an obstruction or the edge of the navigatable river channel. Constant repositioning is required due to water currents shifting sand and mud and hence the channel. Buoys, therefore, serve as waterway "road signs."

Around noon time, the tired, hungry crew breaks for lunch. The temperature has risen into the 90's and humidity is high. The small outboard and its two man crew return to the tender for lunch and to resupply batteries, bulbs and fuel. With seven or eight hours of daylight still remain-ing, there seems to be an endless number of navigational aids to service. The meal has been consumed and as the motor launch departs, another buoy is swung into place from the tender.

Elsewhere on the river, Tom Sawyer might note other events. Three members of a boating safety detachment have been cruising the waters in a 17-foot inboard/outboard. Their mission is stopping recreational boats and checking for registrations and safety equipment. Items which must be present and in good condition include personal flotation devices (life jackets), fire extinguishers, horns and navigational lights.

At a nearby Marine Safety office, Coast Guardsmen work on containing and investigating a river pollution case. Oil samples are taken, the source determined and clean-up operations performed before the current spreads the spill further. Due to recent concern for environmental protection, these pollution control missions have become more numerous and important in the CG's daily work.

Safety office people not involved in the anti-pollution case are inspecting barges, tugboats and other commercial ships, administering and issuing Merchant Marine licenses as well as investigating maritime accidents. The CG is responsible for insuring that all cargo and passenger ships are properly constructed and maintained to eliminate the dangers of accidents. Dangerous cargoes moved and shipped on the rivers are closely monitored by the CG, insuring proper handling and lessening the chances of an accident.

Another installation along the river, briefly mentioned before, is the CG depot. It serves as homeport for the tenders and crews. At these locations, buoys are repaired by welding, sandblasting and painting. CG ships are also maintained and serviced at the depots. New sinkers or buoy anchors are fabricated at these installations from concrete weighing one or two tons.

Tom Sawyer's attention, having been diverted to other river events, is once again drawn to the tender working the river. The evening meal comes and goes but work does not cease. Just before dark, the motor launch returns and is lifted aboard the

ONSHORE navigation aids will be serviced by this boat crew moving away from Coast Guard tender SWEETBRIAR. (Above)

THIS BUOY (left) needed only a light bulb while (below) a similar navigation marker is hauled aboard a Coast Guard tender for cleaning and repairs.

FREQUENT checks of civilian boats for safety equipment are made by Coast Guardsmen on river patrol.

COAST GUARDSMEN WORK closely with civilian agencies during natural disasters for rescue work (above).

RIVER BUOY tender (below) makes its way up river repairing buoys and onshore navigation aids.

tender. Three more buoys are replaced before the skipper calls for all to "secure" and a cheer goes up from the crew. The barge is eased to the nearest suitable shore and tied up for the night.

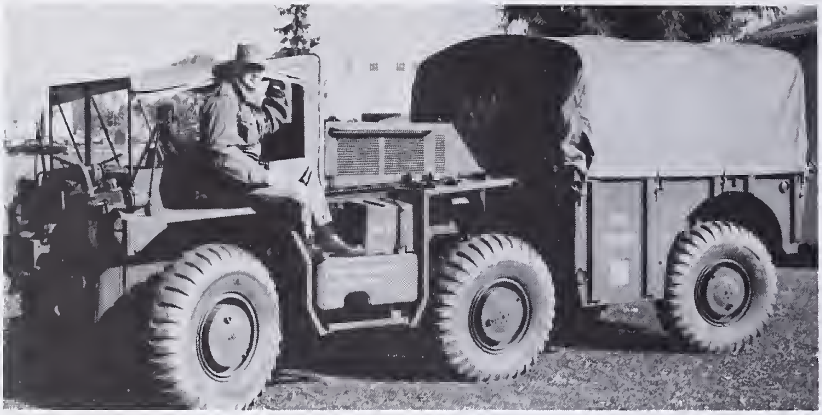
Tools and equipment are stored, decks washed free of slime and work clothes changed in conjunction with a hot shower. It's been a long day on the river, one with little excitement—just hard work. The real excitement is usually reserved for SAR (search and rescue) missions which happen occasionally.

During natural disasters, particularly storms and floods, the river Coast Guardsmen are called upon to perform their traditional life saving mission—helping to build levees, evacuating flood victims, searching for missing people, saving floundering boats and passengers and more. Such work, while dangerous, does present challenges, self-satisfaction and excitement.

There is an occasional lighter side to the SAR work however. For example, the story is told of the cutter YOCONA which maneuvered off a river to evacuate a farmer, his family and livestock from flooded land. The river dropped during the operation, leaving the cutter stranded in a corn field. Fortunately, the river crested again, refloating the ship.

The men and women of the Coast Guard are well trained to perform all the various jobs required during river operations. A testimony to this fact is seen in the low figures reflecting deaths or accidents on the inland waterways. While SAR missions may be more glamorous, the daily operations concerning pollution, boat safety, navigational aids and ship inspections are just as important. Dependent on this work are the recreational and commercial users of the rivers. If a channel is not marked correctly, an accident could occur resulting in the loss of lives, boats and/or cargoes.

It is almost certain that Tom Sawyer would encounter and share experiences with the Coast Guard on today's rivers. And Clemens/Twain would be pleased to write about them since his love and regard for the rivers is matched by this Service. Remembering the mischief that Tom and Huckelberry Finn got into, there is little doubt that the Coast Guard would be called to assist them in some adventure.



GAMMA GOAT, a marginal terrain vehicle used by today's Marine Corps (Photo by S. Lee Waning, USMC).

Maintaining Marine goats and mules

by j. a. heseltine

The Marine Corps operates a school which teaches students how to fix mules and goats. However, this institution at Camp Lejeune, NC does not train veterinarians. Actually, it is the Motor Transport Maintenance School and its purpose is to train mechanics to repair military vehicles, two of which are nicknamed "the mule" and "the goat."

"There is a wide variety of equipment in the Marine motor transport field, ranging from the mechanical mule all the way up to a 10-ton tractor," according to Grover Ash. He is a training specialist at the school and has some forty years of military and civilian motor transport experience. "We do our best to cover as many of these as we can particularly the high density items."

High density items are those motor vehicles which are used widely throughout the Marine Corps—mules, jeeps, gamma goats (marginal terrain vehicles) and 2½-ton trucks.

Marines, both men and women, initially enter the maintenance career field upon their completion of recruit training. The first step is attendance at the basic automotive mechanics course.

During this introductory course, students learn how to trouble shoot, tune up and repair spark-ignition engines. Instruction covers AC and DC charging systems; starting systems; wiring and lighting systems; brake systems; hydraulic systems and fuel systems, including those of "multi-fuel" engines. The latter is basically a diesel engine capable of operating on diesel fuel, gasoline or jet fuel. Further instruction in the course includes extensive practical training in preventive maintenance procedures and the proper preparation, use and management of maintenance records.

"The students are exposed to peculiar maintenance procedures," explained Ash. "Better stated, it would be the maintenance procedures that are peculiar to a specific model of vehicle. The 10-ton tractor is a good example. There are only a few of them in the Marine Corps, so we cover the procedures separately."

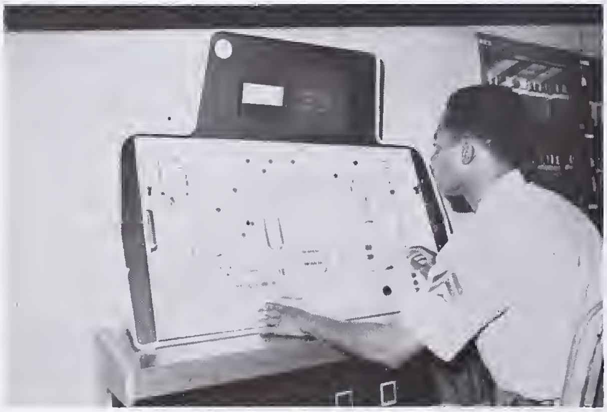
Students are also taught to drive, and are licensed for vehicles up to and including 2½-ton trucks, to enable them to conduct road tests. Also provided are extensive classes on the use, inspection and care of the numerous "tools of the trade."

During one period of instruction, special operations are dealt with. Covered are such topics as the preparation of vehicles for deep water fording and for operation in extreme climates—desert, tropical, arctic.

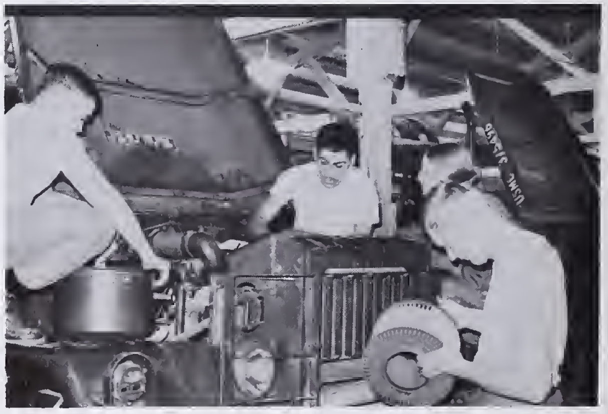
The twelve-week course culminates with a four-day performance test.

"The students function on their own with a considerable inventory of equipment and they are graded on their ability to perform whatever tests they are given," stated Ash. "It is either a 'go' or 'no go' situation."

Since most Marine Corps units throughout the world have a motor transport section, wide geographic assignment possibilities are available for automotive mechanic school graduates. While some of the new mechanics might be selected for immediate, additional training at advanced automotive mechanic courses, most will join a Marine maintenance unit for practical experience before they are selected for the additional formal



COMPUTERIZED simulator allows students to practice trouble shooting 100 diagnostic motor maintenance problems.



PREVENTIVE maintenance is practiced by MTMS students working in teams.

WOMAN MARINE checks her tools as she prepares to work on a tactical vehicle. (Above)

ENGINE VALVES get attention at mechanics school under supervision of instructor (center).

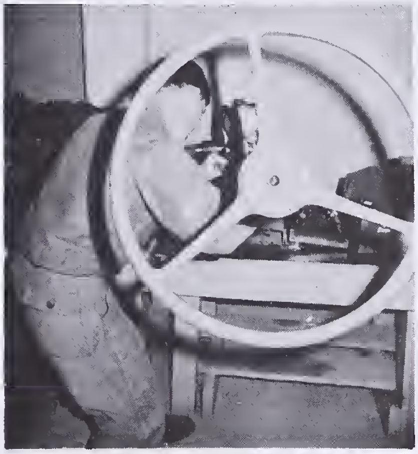
EVEN THE steering column must be studied at auto mechanics school. (Right)

STUDENTS at the Marine Corps mechanics school team up to work on a truck's braking system. (Below left)

MARINE student mechanic works on the starter system of a truck in MTMS. (Below right)

training.

The advanced school is designed to teach students how to repair and overhaul the various systems found in Marine Corps tactical vehicles. During this fourteen-week course, mechanics learn basic welding, body and radiator repair and basic vehicle recovery procedures. Techniques of maintenance supervision are also learned.

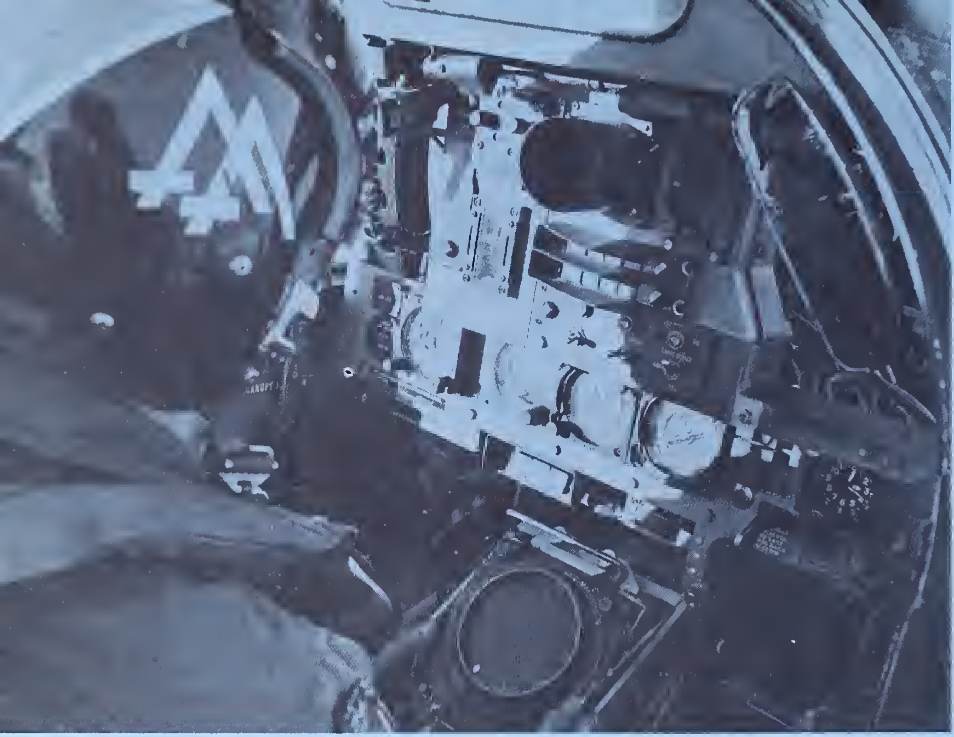


In discussing qualifications for entrance into the mechanic's field, one maintenance supervisor stated that above average reading ability and a working use of mathematics were basic and very important. To remain updated and knowledgeable in the career field, reading of technical manuals is necessary and these are usually written on a college level. Math—particularly fractions and decimals — helps a mechanic use and interpret the readings from test instruments which measure serviceability standards in thousandths of an inch.

Usually, people entering the maintenance field have a high degree of interest in and mechanical aptitude for the work. Quite often their background includes courses in automotive mechanics, electricity, physics and/or practical math. Some have even had working experience in vehicle repair.

Since the Marine Corps places much emphasis on mobility, the preparedness, condition and maintenance of its vehicles are extremely essential. This means that mechanics are in key areas of responsibility and must be trained to a degree which ensures that the Marine's wheels keep rolling.

A bit of classical literature tells about the lack of a nail and shoe which caused the lack of a horse and knight and hence loss of the battle. The Marine Corps does not intend to ever be lacking for the "horse," or the mule or goat when they are needed. For this reason, the automotive mechanics serving in motor transport units are given the best training possible to ensure their expertise and professional capability.



THE NFO's part of the cockpit is a mass of electronic gear.

WITH TAILHOOK down, an F-4 comes in for recovery aboard a carrier.

Naval Flight Officer

story by LT
photos by P

Making split-second dec
Lieutenant Bruce Erickson'

"When you're moving si
don't have a lot of time
going to do," he says. "Yo
make them quick."

Erickson is a Naval Fli
"Phantom" jet. The F–4 i
of today's high performan
with complex equipment.
handle, so while a Navy p
partner, the NFO, is busy

The chores Erickson fac
along involve navigating
maneuvers, tracking targe

"That leaves the pilot fr
his mind and eyes focuss
looking for other airpla
collisions," says Erickson
health."

It takes this pilot-NFO
aircraft. The aircraft type
the NFO's duties.

For example, in the la
warfare plane, the NF
decisions based on inform
control equipment built ar

In the carrier-based, an
craft, the NFO formulates
on the necessary maneuv
attack.

"The unusual situation
out about the Navy's new
more equipment for the
pilot. It's really an NFO's

Erickson's F–4 "Phanton
can run intercepts against
"or you can play fighter
has also been used as a bo

Formal training for the
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Officer (NFO) in an F–4
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more than one man can
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plane as well as plotting
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assembled by sensors and
a Univac digital computer.
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r a successful submarine

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) than there is for the
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several capabilities. "You
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og fight." The "Phantom"

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ears and costs the Navy
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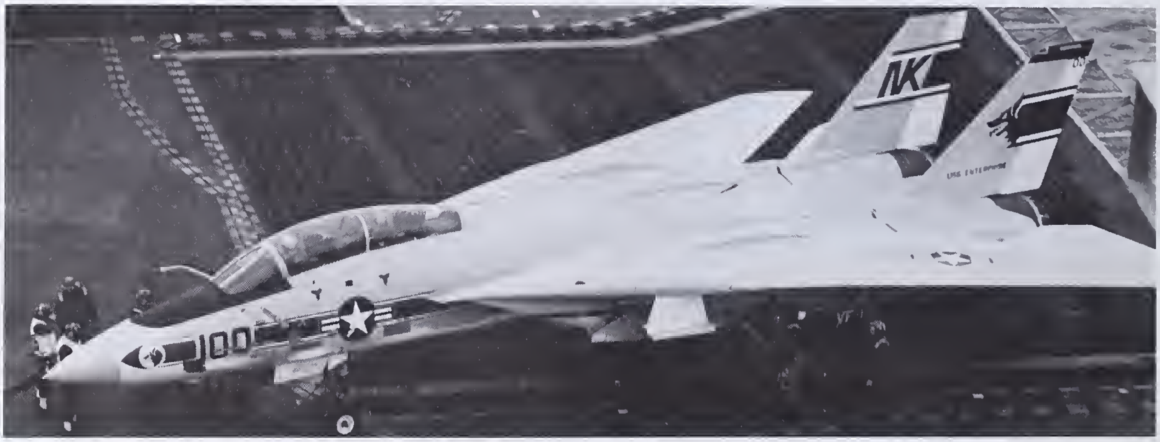
the cycle starts with a
each day is split between
work.
this period, students go
est. Erickson recalls, "You
eat off the land, shoot
lose a few pounds."
familarization with all the
Students also go through
g exercises, but are not

FLIGHT SUIT of NFO is well equipped with survival gear.

T-39 SABRELINER IS used during 24 weeks of NFO training.

NFO (left) and his pilot climb aboard their Phantom II.



F-14 TOMCAT is prepared for carrier takeoff.

PHANTOM II fighter leads a TOMCAT multi-mission aircraft during aerial maneuvers.

Actual flights begin in Training Squadron 10 using the high speed T-2C "Buckeye" basic trainer and the twin-jet T-39 "Sabreliner." There are also classes in basic navigation, meteorology, computers, radio communications procedures, federal aviation regulations and Navy flight regulations.

During the initial phase of their instruction, students are exposed to NFOs and pilots assigned to various fleet units. On the basis of these meetings, each student chooses the NFO speciality he wants to pursue.

Advance training schools of varying length follow the 24 weeks at Training Squadron 10.

The next stop is an intermediate training squadron where all the skills and information gathered over nearly a year of study are put to work on operational aircraft.

NFO's are eventually assigned to duty with a carrier or shore-based squadron, depending on the aircraft in which the NFO is qualified to fly. Erickson serves with Fighter Squadron 74 which was recently aboard the carrier Forrestal. The squadron usually spends about one-third of each year at the Oceana, Virginia, Naval Air Station.

The teamwork he has developed with his pilot, Lieutenant Scott Shuman, is one of the most enjoyable things about flying for Naval Flight Officer Erickson. "You have to learn to work together with the guy you're flying with, he says.

The smooth operating pilot-NFO relationship develops over the course of many hours in the air together. Their flying skills are constantly being exercised, so they are always ready to be put to use. Rarely does a week go by that Erickson and Shuman don't log at least six hours in the air. That number can double and even triple when they operate from an aircraft carrier.

Mention carriers to anyone who's ever flown from one and their eyes light up, and Erickson is no exception.

Even though the Navy's mammoth carriers are over 1,000 feet long, aircraft are launched on a 250-foot runway. Launching 25 tons of plane in that distance requires the extra push of a steam catapult.

Erickson can't keep from chuckling when he describes his first catapult launch, "It's almost like a carnival ride . . . it's a great feeling. You want to put another quarter in the slot and get another ride!"

Landing on an aircraft carrier is every bit as exciting as taking off. "The part that's kind of excruciating for about a second is when your wheels hit the deck, and you wonder, 'Did I snag the wire?' "

The wire is a 1¼-inch steel cable stretched across the flight deck so the plane's tail hook can catch it and stop in 250 to 300 feet. "It's quite a jolt," Erickson says.

Another thing about carrier duty that appeals to Erickson is the opportunity it gives him to travel. "My wife joins me overseas at sometime during every cruise," he says. "We went up to Rome when the ship was in Naples last year."

Most of Erickson's travels have been in the Mediterranean area, but he has also visited the northern European cities of Antwerp, Amsterdam and Copenhagen. His favorite spot is Palma, a resort city on the island of Majorca off the coast of Spain.

Becoming an NFO is a long and difficult process. Before it begins, applicants are required to be a graduate of an accredited college or university and attain qualifying scores on a selection test. There are also tough physical requirements.

But Erickson and his fellow NFO's feel the challenge of the long training was worth their effort, for they are part of those unique and very exclusive teams which fly the Navy's planes.

DAY IS done. The NFO departs the hangar for home.

THE WELDER, one of today's metal processors, is certified annually in arc, gas and heli arc processes by federal agencies.

Colonial trades updated

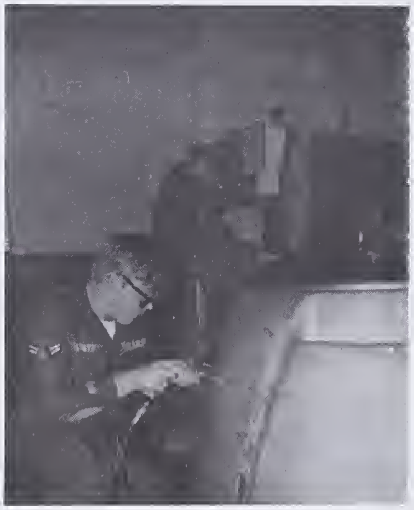
by d. g. francis

An old adage states that "the more things change, the more they remain the same." A good example can be found in early America and in the modern Air Force.

In colonial America, most towns and villages had shops where shingles advertised metalworkers, toolmakers, painters, fabric and leather workers and seamstresses. Later, these vocations translated into such military professions as welders, parachute riggers and lifeboat maintainers. Finally, when the Air Force became a reality, these skills were incorporated into occupations connected with aircraft repair.

In today's technological Air Force, the earlier American vocations play a vital role. Their new titles may seem confusing but they only belie the old skills. For example, modern nomenclatures are metals processing specialist, apprentice machinist, fabric and rubber products specialist, airframe repair and corrosion control technician, and the non-destruct inspector.

Air Force people with these job descriptions are stationed around the world in organizations called Field Maintenance Squadrons (FMS). Though they still do basically the same work that their colonial counterparts did, they now apply the wonders of advanced technology. Many of the military skills can be translated into similar ones in the civilian community today. One metals processing sergeant says, "All of the FM specialties make quite lucrative trades. In some of the fields, such as mine, a person can become qualified, gain four years of experience and then go into business for himself." Metals processing in the Air Force relates to being a welder, machinist and sheet metal worker combined in the public domain. In other words, the individual is a modern day blacksmith.

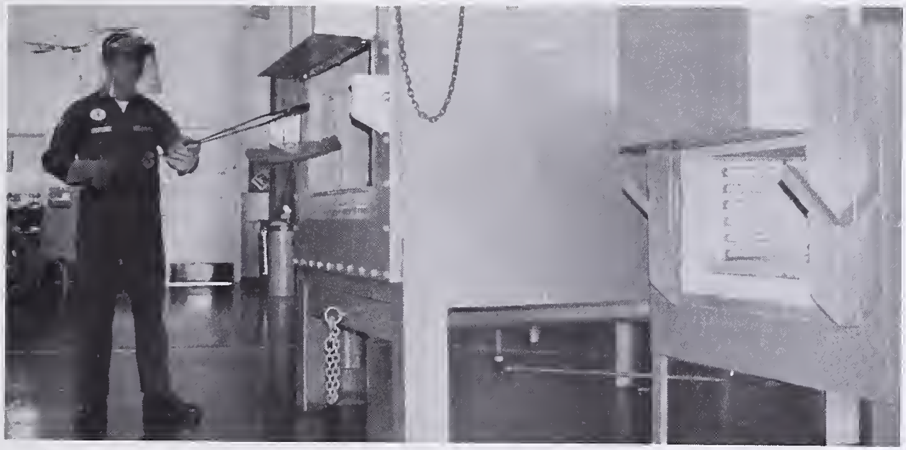


MACHINIST repairs housing cone of Air Force jet engine.

"There are technical training schools for all these (FM) specialties at Chanute AFB, IL," according to one FMS supervisor. "They run from four weeks for the welder to 20 weeks for the machinist. Not too many years ago, these specialties were assigned based on the particular need of a given organization and each shop was set up separately. With advanced technology, there have been changes in the maintenance concept and today these trades have been consolidated into the close knit operations of the Field Maintenance Squadron."

MACHINISTS in todays Field Maintenance unit manufacture parts and tools to keep the Air Force's fleet flying.

The Fabric and Rubber Products speciality encompasses the work that used to be performed by the survival equipment specialist. Today's worker in that area still performs much of the former job, but uses modern material and equipment. "In a sense, I'm a seamstress for a B–52," comments one individual in the career field. "We're responsible for the maintenance and repair of all survival equip-



METALS Processing specialist removes repaired aircraft part from 6000° oven. Smaller oven at right ranges up to 2500°.

FABRIC and Rubber Products specialist repairs survival gear in an Air Force Field Maintenance complex.

SHEET METAL workers use corner press to shape and trim outer skin for aircraft fuselage.

SPECIALLY designed machine is used to inspect and repair life rafts by Field Maintenance techs.

ment as well as items on an aircraft made of rubber, cloth, leather or other fabrics."

The Airframe Repair field is primarily composed of what is known as sheet metal workers, while painters have become corrosion control specialists. Airframe repair people may work on fixing a part of the aircraft's outer skin one day and be manufacturing or repairing part of the heavier internal structure the next. Corrosion control personnel do just as the title implies, control corrosion. It isn't just washing and polishing aircraft. Corrosion can occur in many forms throughout the airframe and these trained specialists must prevent it.

Technology has brought many inovations to the old colonial vocations. These range from specially designed ovens for improving the hardness, stress and other factors in metal, to special techniques for applying paints which will withstand great heat and wind blasts. But one of the most unique developments is the non-destruct inspection (NDI) lab. Specialists (inspectors) who work in it or with it are responsible for x-raying an aircraft from top to bottom, looking for such things as internal hairline cracks developing in a wheel cylinder and other defects not visible to the naked eye.

In bygone times, a seamstress took days sewing a flag and blacksmiths took days making a pair of horseshoes. Their counterparts in today's Air Force Field Maintenance Squadron can detect defects in the structure or equipment of a sophisticated aircraft and in the comfort of an air conditioned hangar, accomplish repairs and have the plane back in the air—all within hours.

While the job skills within the FMS may not be the most romantic or adventurous, they are vital to the crew and aircraft supported and hence to the overall mission. Because of this, the specialists receive the top training available in their fields. If it were otherwise, lives and aircraft might be jeopardized.

The schooling and experience received as a member of a Field Maintenance Squadron team might make it possible for individuals to enter civilian businesses for themselves and times. The need for metal workers, toolmakers, painters, fabric and leather workers and seamstresses is as important in today's military and civilian communities as it was in 1776 America. Hence the adage appears true, the more things have changed, the more they have remained the same.

Sailing the Army's navy

AMPHIBIOUS lighter takes cargo from transport ship to beach supply dumps. (Official Army photos)

by d. m. ryan

In 1775, General Washington realized the need for a colonial navy to harass British shipping. For this purpose, he converted two small schooners to warships then enlisted seafaring men into his army to serve aboard the craft.

Months later, other sailor-soldiers under the command of General Glover manned a fleet of small boats and evacuated the Continental Army from New York and disaster. The same group also transported Washington and his troops across the Delaware River on Christmas night, 1776, for the successful attacks on Trenton and Princeton.

WATERCRAFT operator brings his tugboat into dock.

This heritage of a navy within an army has continued to the present. Today, the U.S. Army's Transportation Corps maintains a fleet of some 2,200 boats and ships. Its primary port and training center is located at Fort Eustis, VA. Manned by seagoing soldiers, this "navy" has the major mission of transporting cargo and troops from deep water ships into underdeveloped port areas.

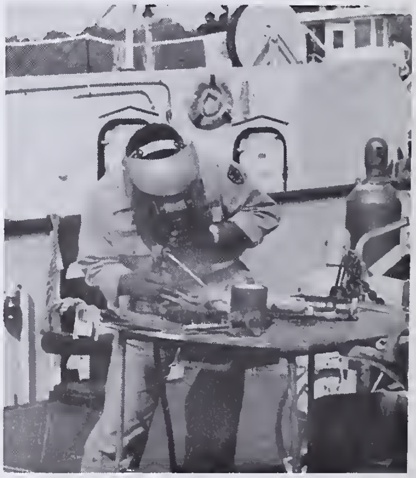
The Army's navy consists of watercraft ranging in size from the 45-foot tug called "Little Toot" to the 338-foot Beach Discharge Lighter "Lieutenant Colonel John U. D. Page." In between is an assortment of barges, landing craft, lighter amphibious resupply cargo vessels, pickett boats and a floating machine shop. These ships and boats are designed to move cargo and/or troops or to asssist such actions in support of Army ground and amphibious operations.

As with Washington's original fleet, today's miniature navy is manned by soldiers trained and performing as sailors. Even the job titles belie their Army connections—seaman, watercraft or amphibian operator, marine or amphibian engineer, marine hull repairman, cargo handler and diver. There are even dredge masters and deck officers. While these olive drab dressed sailors may be found working in ports from the U.S. and Canal Zone to Europe and Japan, they receive their sea training at the Army Transportation Center and School, Ft Eustis, VA.

Individuals seeking to sail with the Army begin as do all soldiers—with Basic Combat Training. Then they report to Ft Eustis to attend the Basic Seaman Course. This three weeks of schooling is designed to provide the students with a working knowledge of crewman's duties and responsibilities aboard Army watercraft. The instruction also covers marine terminology and customs, water safety, emergency procedures, deck equipment and its maintenance, rigging, use of lines and small boat operations. Before stepping aboard any ship, each student must be able to swim. Instruction is available for non-swimmers.

Most graduate seamen usually report directly to watercraft for duty and on-the-job training. While all can eventually attend advanced schooling at Ft Eustis, some are selected to do so immediately after the basic course. Army sailors may receive their advanced training in one of several areas depending on their interests, aptitudes and the needs of the service.

For some people, being able to pilot a boat might seem more exciting or romantic than repairing it. But both occupations are critical and take highly trained experts. For the soldiers with salty, seafaring blood, the six-week watercraft operator's course is where adventure begins. The students learn piloting, tug operations, towing methods, boat inspection procedures, use of navigational aids, cargo movement techniques and procedures in preparing for convoy operations. Graduates can later advance to handling larger ships and responsibilities as harbor craft operators.



WELDER repairs equipment on the Army's floating machine shop.

ARMY seamen coil tie lines after a day's work.

A related field into which a seaman may enter after the basic course is amphibian operator. These individuals attend a six-week course of instruction aimed at the navigation, handling and general operation of amphibious resupply cargo vessels and landing craft only. Graduates are capable of piloting these types of boats under any conditions, moving cargo and troops over land and water.

The mechanically minded seaman-soldiers may attend a six-week course to prepare themselves for duty as marine engineers. They are trained to monitor and maintain most of the equipment and engines found aboard Army watercraft. Included in the instruction are methods of storing fuel and fresh water and trouble shooting and repairing internal combustion engines, outboards, pumps, compressors, boiler and heating systems, electrical circuits and generators. The student also learns to use test equipment and shop maintenance tools.

In the later stages of career development, the marine engineers become engine repairmen and receive training on propulsion systems, auxiliary equipment, refrigerator systems, fuel injection systems and diesel engines. They also learn to weld, blacksmith and work with precision tools.

Some soldiers graduating from the basic seaman course will later train as engineers for amphibian craft only. They attend Amphibian Engine Mechanic and Engine Repairman courses at Ft Eustis. The instruction prepares them to maintain the systems and equipment found on the Army's resupply cargo and landing craft.

In addition to operators and engineers, the Army's navy trains other sea specialists to perform as hull repairmen, cargo handlers and divers. The hull repairman learns to inspect and fix metal, wood, fiberglass and aluminum boat hulls. Cargo handler's school prepares the student to perform in such areas as loading and unloading, movement, rigging, winch operations and marking of cargo—all the basic stevedoring skills.

Army diver's training is divided into three phases, totaling over 22 weeks. It advances the individual from apprenticeship work and basic underwater search and rescue and demolition SCUBA skills to salvage, underwater repair and deep/shallow water operations.

Ambitious participants in the Army's naval career fields may progress to the point of serving as harbor masters, capable of navigating large ships in and out of ports. Some may eventually become warrant officers and serve as deck officers or chief engineers.

Ashore, it might be difficult to distinguish the Army's seamen from other soldiers except for sea terminology used. However, once at sea, only their uniforms mark the sailors as non-Navy. While the fleet they man might not be a threat as a world naval power, the "sea-soldiers" perform with pride their crucial mission in support of other Army operations.

It probably would not surprise Generals Washington and Glover to find the Army's navy of today still moving troops and cargo in support of a major mission. For, some 200 years ago, a similar fleet was performing the same tasks. It is this heritage which the salty soldiers of the modern Army maintain and build upon daily as they sail their version of The Seven Seas.

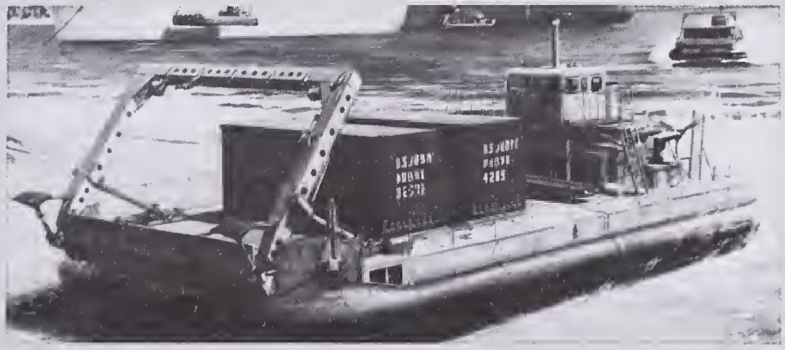
New Army vessel

A new watercraft is about to join the Army's fleet. It is the Lighter, Amphibious, Air Cushion Vehicle (LACV–30) which will eventually replace the current cargo carrying amphibians. Prototypes of the vessel are due out this spring and crews are already being trained.

The LACV–30 is 76 feet long and can carry a 30 ton load up to a speed of 50 MPH. It is designed to operate over water, marginal swamp-like terrain, reefs, underwater obstacles, beaches, rivers, snow, ice and land. The half boat-half aircraft moves using a gas-turbine engine and rides on a four-foot cushion of air. Operationally, it will be used to move cargo in hostile areas, support troops in amphibious operations and conduct shore-to-shore operations as well as search and rescue, medical evacuation and other water transport missions.

Crews for the air cushion craft will be taken from detachments composed of members trained in such necessary skills as ACV operator, crewman, amphibian engine repairman, multi-turbine mechanic, radar and radio repairman, hull repairman, airframe and electrical repairman and hydraulics repairman.

The new watercraft should enhance the capabilities of the Army's navy and provide additional exciting career opportunities for its sailor-soldiers.



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Marines land at New Providence

Two weeks after departing the colonies, the Continental fleet under Esek Hopkins rendezvoused off Nassau Harbor. The date was Sunday, 3 March 1776.

Just before noon, 230 Marines and 50 seamen under the command of Marine Captain Samuel Nicholas splashed ashore near Fort Montagu. This action marked the Continental Navy's first participation in an amphibious operation and the Marine's initial steps upon enemy soil.

The assaulting force captured Fort Montagu and the next day secured the island by taking Fort Nassau and arresting the governor. Confiscated for use by the Continental Army were 100 cannon/morters, 10,000 round shot, 24 casks of powder and other ordnance. Enemy troops had earlier escaped with more powder.

On 17 March 1776, while the British were evacuating Boston, the triumphant Continental fleet sailed for home with its prizes.

The above picture is part of a Marine Bicentennial series painted by Major Charles Waterhouse, USMCR, combat artist. It shows attacking Marines and sailors wearing bits of period uniforms and civilian clothing. Two Bahamian sloops taken the previous day are being used to transport the landing force close to shore. In the left background, covering the assault, is the fleet flagship ALFRED.